

**Testimony on Biologically Identical Hormone Therapy  
House Subcommittee on Human Rights and Wellness**

**Washington, D.C.**

**July 22, 2004**

**David Brownstein, M.D.**

**Center for Holistic Medicine**

**5821 W. Maple Rd.**

**Ste. 192**

**West Bloomfield, MI 48322**

**[www.drbrownstein.com](http://www.drbrownstein.com)**

**248.851.1600**

**248.851.0421 Fax**

The 21<sup>st</sup> century presents a challenging time for physicians and patients alike. One day, headlines in the newspapers proclaim the effectiveness of conventional hormones in treating Alzheimer's disease, heart disease, osteoporosis, etc. The next day, different headlines claim that conventional hormones may not help the above conditions and may actually worsen them.

What is the doctor and what is the patient to do?

For the doctor, it is essential to search for an underlying cause(s) of illness and to prescribe treatments that help promote healing and that strengthen the immune system.

For the patient, it is necessary to become knowledgeable about different treatment options available. Patients need to educate themselves about the prescription drugs they use and about the natural items they use. The more involved the patient is in their health care decisions, the better outcome they will receive.

In the 21<sup>st</sup> century, the scope and complexity of chronic medical conditions plaguing our society is breathtaking-- fibromyalgia, lupus, multiple sclerosis, Crohn's disease, ulcerative colitis, migraine headaches, chronic fatigue syndrome, cancer, osteoporosis, etc. All too often, the treatments proposed by conventional medicine are so toxic that the "cure" is worse than the illness—just ask anyone who has been on long-term steroids to treat some of the above conditions. In order to treat any illness, it is necessary to understand the underlying cause of the illness. If you don't understand the underlying cause of the illness, then how can you develop an effective treatment plan?

As a society, we have settled for sub-par health. People who suffer from chronic fatigue syndrome are often told by their physicians, “There is no treatment, you just have to live with it.” Those who suffer from headaches, including migraine headaches, are often given medicines that have side effects worse than the headache itself. If one medication doesn’t work, there is always another one to take its place. Many times, these medications only treat the symptoms of disease; they do not address the underlying cause of the illness.

Often times the underlying cause of many chronic illnesses may be a hormonal imbalance. It is impossible to achieve your optimal health without first achieving balance within the hormonal system. All of the systems of the body, including the nervous system, the cardiovascular system, the immune system and the circulatory system depend upon a balanced hormonal system.

A hormone is a chemical messenger produced in the body by a gland. Examples of the different glands of the body include the thyroid gland, adrenals, ovaries, testicles, etc. Hormones have a specific regulatory effect on the activity of the body. For example, the thyroid gland produces thyroid hormones which regulate the metabolism of the body.

Natural, biologically identical hormones are substances generally produced from plant products that mimic the body’s own hormone production, both structurally and chemically. Examples of natural, biologically identical hormones include desiccated thyroid, DHEA, natural progesterone, natural estrogens, natural testosterone, melatonin, hydrocortisone, human growth hormone and pregnenolone. Drug companies alter the structure of natural hormones in order to create a synthetic version of a hormone that is patentable. Hormones that have been chemically altered are termed synthetic hormones.

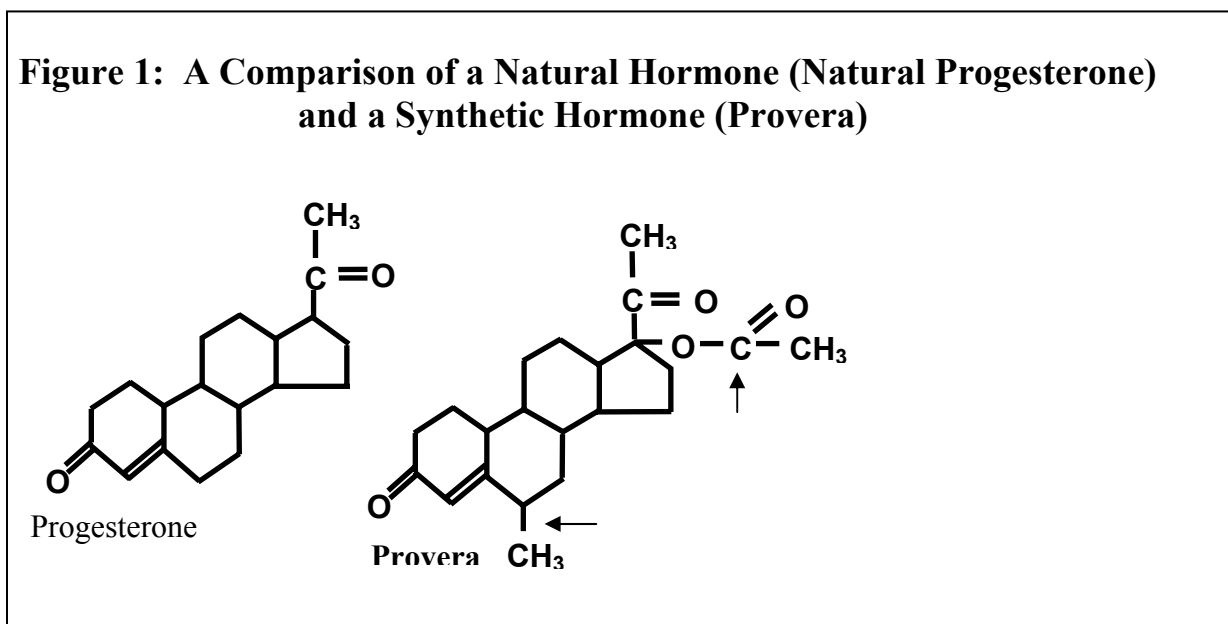
I have found that the clinical use of natural, biologically identical hormones restores hormonal balance. Natural, biologically identical hormones can be an effective treatment option not only for promoting optimal health but also for treating many chronic illnesses including; chronic fatigue syndrome, fibromyalgia, PMS, heart disease, menopausal symptoms, autoimmune disorders and many other conditions.

Natural, biologically identical hormones are an important part of my medical practice. These items are made by a compounding pharmacist. It is imperative that the FDA not limit or restrict compounding pharmacies from providing patients with safe and

useful products which are used to treat a variety of illnesses. I could not effectively practice medicine without the use of a compounding pharmacist.

Natural, biologically identical hormones are contrasted with synthetic hormones. Synthetic hormones are not naturally occurring substances in the body. In fact, synthetic hormones are not found in any living forms. Synthetic hormones can be thought of as foreign substances to the body. Because they are foreign substances to the body, is there any wonder that there are so many serious side effects with the use of synthetic hormones? Examples of synthetic hormones include Provera, birth control pills, etc.

Hormones work in our bodies via a “lock and key” model. When a hormone is released from its gland the hormone (the “key”) binds to its receptor (the “lock”). This binding is analogous to a key being put in the ignition of the car. When the binding occurs a chemical reaction takes place. Natural, biologically identical hormones have a perfect fit in these receptors. The “key” fits perfectly in its complimentary “lock”. This is contrasted with a synthetic hormone in which the un-natural hormone (i.e., the “key”) does not fit well in the body’s receptor (i.e., the “lock”). This un-natural fit results in the high rate of adverse effects seen with the use of synthetic hormones. A comparison of the chemical structure of a natural hormone (natural progesterone) and a synthetic hormone (Provera) is shown in the slide (Figure 1). If we are going to use a hormone to treat any condition, then we should use a natural hormone over a synthetic hormone every time.



The difference between the natural hormone, progesterone, and the synthetic version, Provera, is illustrated in this diagram. The arrows in the Provera illustration point out the additional side chains added to progesterone. These added chains make Provera a foreign substance in the body, leading to an increased risk of adverse effects.

Natural, biologically identical hormones, when used appropriately, will enhance one's health and will treat or even cure diseases, all without any appreciable side effects. Many physicians erroneously believe there is no difference between a synthetic hormone and a natural hormone. That is usually because these physicians have little or no experience in the use of natural, biologically identical hormones and other natural products. My clinical experience shows that there is no better substitute for the body's own production of hormones than using a natural form of that hormone. This experience has been repeatedly confirmed by my patients' positive responses to natural, biologically identical hormones.

Natural, biologically identical hormones can improve well-being, slow aging and reverse many chronic conditions. After taking natural, biologically identical hormones, my older patients constantly proclaim that they feel like they did when they were in their 20's. I have found natural, biologically identical hormones to be a great benefit and often a cure for many conditions including; chronic fatigue syndrome, PMS, endometriosis, infertility, headaches and migraine headaches, recurrent infections, fibromyalgia, ulcerative colitis, Crohn's, and other autoimmune disorders. It is rare for a patient with any of the above conditions not to show significant improvement in their conditions after taking natural hormones. I am continually amazed at how many chronic diseases can be halted and, many times, cured through the use of natural, biologically identical hormones.

Man has searched for a fountain of youth for thousands of years. Although there is no "cure" for aging, my clinical experience has shown that natural, biologically identical hormones, when used appropriately, can slow down many of the signs of aging including deteriorating mental function, loss of muscle tone, and wrinkled skin. Hormone production peaks when we are young, usually in the age range from 20 to 30. In older people, supplementation with natural, biologically identical hormones can

reverse many of the signs of aging. Synthetic hormones do not provide the same anti-aging benefit as natural hormones.

My patients are familiar with the following question: “If it is found that you are low in a hormone, and you are given a choice of a natural hormone—one that closely mimics your own hormone chemically and structurally, versus a synthetic hormone—a man-made derivative of a hormone that has been structurally altered to become a patentable product, which one would you pick?” A vast scientific knowledge base is not needed to realize a natural hormone will perform better than a synthetic hormone every time. This statement holds true when comparing all natural products to synthetic products, including vitamins, minerals and herbs. It is a common-sense argument to use a natural product to treat disease and promote health, and there are many studies that back up this idea.

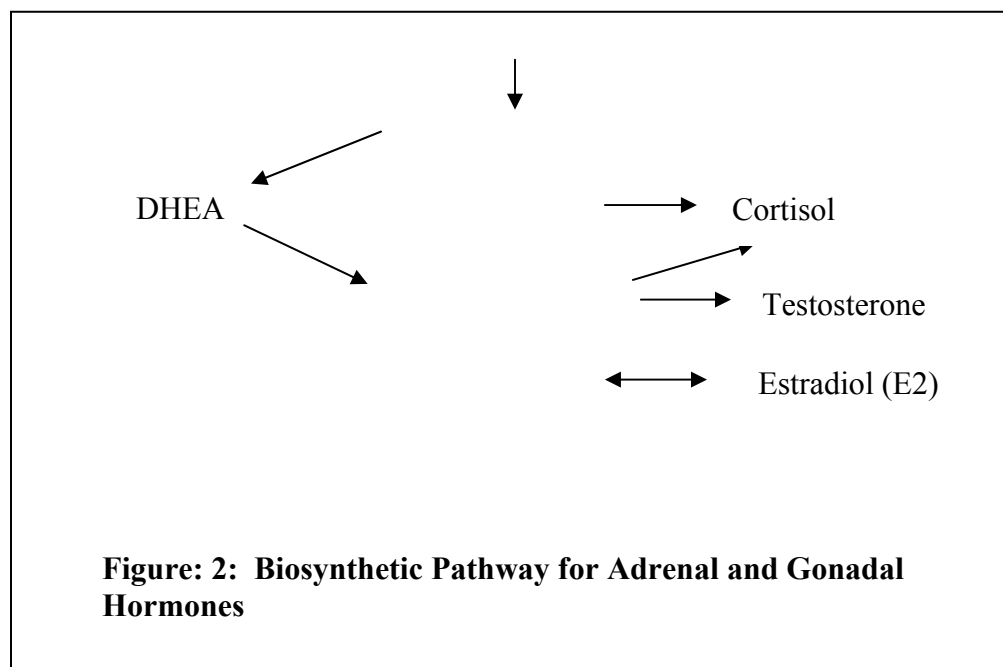
Natural, biologically identical hormones work better when used in combinations. When I see books about individual natural hormones such as DHEA, I find the fault of these theories is they only address one hormone at a time. My experience shows that this is not the correct approach. A chronic condition is often a sign of a serious imbalance in the immune system of the body. This imbalance usually cannot be successfully treated with a single agent. In order to bring the immune system into a more balanced state, combinations of therapies are often necessary. I have found using combinations of natural hormones, when indicated, can often reverse this imbalance and even cure many chronic diseases. I have not had nearly as much success in my practice using natural hormones individually to treat disease or to slow down the signs of aging.

The natural hormones described here and in my books are used only in “physiologic doses.” A physiologic dose of a natural, biologically identical hormone refers to a small enough dose so as not to cause the body to cease production of the hormone. When hormones are given in “pharmacologic doses,” (i.e., doses larger than the normal production in the body), the body senses an overload of that particular hormone and will cease all production of it. Many problems attributed to hormones- for example, body builders getting cancer and other side effects from using too much testosterone- can be attributed to using excessive or large pharmacologic doses. I have observed no serious side effects from any of the natural, biologically identical hormones

used in my practice covered in this book when physiologic doses are used.

All of the natural treatments I have described should be managed with a health care provider—someone knowledgeable in the use of natural, biologically identical hormones. The hormones included in this paper can significantly help chronic conditions, improve health, and slow down the signs of aging. However, they can also harm you if not used appropriately and under the guidance of a knowledgeable health care provider. Improved results are achieved when other natural agents, such as vitamins, minerals, and herbs, are used to support these hormones.

I believe the most effective way to use natural, biologically identical hormones is to use natural hormones compounded from a compounding pharmacist. Many natural hormones sold over the counter are not of good quality. My professional experience has shown that natural, biologically identical hormones made from a compounding pharmacist are a safe and effective treatment for a wide range of medical problems.



I would like to review some of the natural compounded hormones that I use in my practice. All of the adrenal hormones are produced from the fat-like substance cholesterol, as shown in Figure 2.

## Pregnenolone

Pregnenolone is a steroid hormone produced in the adrenal glands. Pregnenolone is often referred to as the “mother hormone”, since it is the precursor hormone to all of the adrenal hormones (refer to Figure 2 above). It is formed from cholesterol and is necessary to produce other adrenal hormones including progesterone, DHEA, hydrocortisone, testosterone, and the estrogens. Pregnenolone is also produced in the brain. In fact, pregnenolone levels in the brain are much higher than they are in the peripheral tissues.<sup>i</sup> Pregnenolone has been shown to affect many of the neurotransmitters in the brain. Pregnenolone like the other hormones mentioned here, decline with age. At age 75, there is a 65% reduction in pregnenolone production in the body as compared to levels at age 35.<sup>ii</sup> I have found pregnenolone particularly useful in treating memory problems, fatigue and depression.

## **Progesterone**

Progesterone is one of two main hormones produced by the ovaries. The other main ovarian hormone is estrogen. Progesterone is primarily produced in the second half of the woman’s menstrual cycle and is the hormone necessary for the survival of the fetus. Men produce very tiny amounts of progesterone from the testicles. In men and women, a small amount of progesterone is also produced in the adrenal glands, where it acts as a precursor for the adrenal estrogens, testosterone, and cortical steroids. There are two types of progesterone currently available: natural progesterone and synthetic progesterone (e.g., Provera). Natural progesterone is made from plant products and has the same chemical structure as the progesterone that is produced in the human body. A compounding pharmacist can make natural progesterone. The difference in the chemical structures of natural progesterone and Provera are illustrated in Figure 1. I have found natural progesterone safer and much more effective for treating illness and promoting health than synthetic progesterone.

## **Natural Estrogens**

A difficult decision women have to make is whether to use estrogen for hormone replacement therapy. This is a very controversial topic. One must weigh the benefits of

estrogen, which include providing relief from hot flashes as well as slowing down the rate of osteoporosis, versus the potential side effects such as an increased risk of endometrial cancer and, most likely, an increased risk of breast cancer. I will explain the risks and benefits of estrogen replacement therapy and offer you a safer, more natural approach.

Estrogen is produced primarily in the ovaries. It is produced in a cyclical fashion in a menstruating woman. In a typical 28-day cycle, estrogen is produced in both the first half of the cycle known as the follicular phase, and in the second half of the cycle known as the luteal phase. There are three different types of estrogens manufactured by the body: estrone, estradiol and estriol. Each of these different types of estrogen has very different properties in the body. Jonathan Wright M.D., a pioneer in natural therapies, measured the serum levels and urinary excretion of the three estrogens and reported that of the three types of estrogen measured, 80% was estriol, 10% was estrone and 10% was estradiol. If we're going to give estrogen replacement therapy to a woman, doesn't it make sense to give it in the same proportions as naturally made in the body? Unfortunately, traditional medicine's approach to estrogen replacement is not even close to these proportions.

Conventional estrogen replacement therapy usually consists of using synthetic derivatives of estrogen. Premarin, which is the most common synthetic estrogen product in use today, is a horse-derived estrogen complex, consisting primarily of estrone. Estrace, another common synthetic estrogen hormone, contains 100% estradiol. Neither contains the three forms of estrogen--estriol, estrone and estradiol--in the percentages that are found naturally in the human body. Common sense would argue that to achieve the greatest benefit from estrogen replacement therapy, we should try to mimic the body's own production of estrogen. In other words, we should use the same proportions of estriol, estrone and estradiol normally produced in the body. A natural estrogen preparation has been formulated by Dr. Wright and is known as Triest. Triest is made from plant products and has the same chemical structure of the three types of estrogen produced in the human body. Triest mimics the body's own production of estrogens by containing 80% estriol, 10% estradiol and 10% estrone. I believe that using Triest as



compared to a synthetic estradiol or estrone compound is a much safer and more effective method to replace estrogens in a woman.

## **DHEA**

The benefits of taking DHEA include preventing and treating: Alzheimer's, asthma and allergies, bacterial and viral infections, cancer, cardiovascular disease, diabetes, hypertension, high cholesterol, obesity, osteoporosis and immune system diseases including AIDS. I have also found DHEA particularly effective for treating autoimmune disorders such as fibromyalgia, rheumatoid arthritis, lupus, Crohn's, and others.

## **Natural Testosterone**

The benefits of replacement doses of testosterone are truly amazing. The benefits include: improving osteoporosis, improving the symptoms of diabetes, increasing a general sense of well being and improving libido and sexual functioning. In addition, testosterone can decrease negative mood parameters including anger, irritability, nervousness, and tiredness. Testosterone has been shown to prevent and treat coronary artery disease and improve and treat autoimmune disorders such as lupus and rheumatoid arthritis. Also, it has been shown that testosterone has the ability to rejuvenate muscle mass.

## **Final Thoughts**

Natural, biologically identical hormones are an integral part of my treatment regimen for combating a variety of illnesses from autoimmune illnesses to cancer. Natural, biologically identical hormones are a safe and effective treatment option and it is imperative that physicians, compounding pharmacists and patients alike are allowed to continue to utilize natural, biologically identical hormones.

---

<sup>i</sup> Sahelian, Ray. Pregnenolone, Nature's Feel Good Hormone. Avery Publishing. 1997

<sup>ii</sup> Roberts, Eugene. Pregnenolone-From Selye to Alzheimer and a Model of the pregnenolone sulfate binding site on the GABA Receptor. *Biochemical Pharmacology*, Vol. 49, No. 1. P. 1-16, 1995